

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-12. (Canceled)

13. (Currently Amended) A range finder comprising:

a projector unit ~~for projecting that projects~~ linearly polarized light onto a subject;

one or more polarizing direction selection units, each of which selects light having a polarizing direction from light reflected by the subject;

~~an identical principal point~~ a first image input unit, disposed in a position ~~substantially optically identical~~ to the position of the principal point of the projector unit, where the first image input unit captures a first reflected image based on light reflected by the subject and selected by one of the polarizing direction selection units;

~~at least one nonidentical principal point~~ a second image input unit disposed in a position ~~not identical to~~ optically different from the position of the principal point of the projector unit, where the second image unit captures a second reflected image based on light reflected by the subject and selected by one of the polarizing direction selection units; and

a determining unit that determines a distance to the subject based on the first reflected image and the second reflected image.

~~a polarizing direction selection unit for selecting light having a polarizing direction, wherein~~

~~the identical principal point image input unit and the at least one nonidentical principal point image input unit monitor only the light selected by the polarizing direction selection unit from light reflected by the subject and measure a 3D shape of the subject on the basis of images generated from the monitored light.~~

14. (Canceled)
15. (Currently Amended) A 3D image ~~acquired~~acquisition method comprising:
projecting linearly polarized light onto a subject;
selecting light having a polarizing direction from light reflected by the subject;
~~monitoring~~acquiring the selected light at a position ~~substantially optically~~
identical to the position of the principal point ~~of~~at which the projecting of the linearly
polarized light is performed and a position ~~not identical to~~optically different from the position
of the principal point ~~of~~at which the projecting of the linearly polarized light is performed;
and
measuring a 3D shape of the subject on the basis of images generated from the
~~monitored~~acquired light; and
outputting the 3D shape of the subject.
16. (New) The range finder according to claim 13, wherein
the projector unit projects an encoded stripe pattern onto the subject; and
the first image input unit and the second image input unit are arranged to
deviate from a line extending in a direction of a length of the stripe pattern.
17. (New) The range finder according to claim 13, further comprising:
an angle adjustment unit for changing an angle of the polarizing direction
selected by the polarizing direction selection unit, relative to the polarizing direction of the
linearly polarized light.
18. (New) The range finder according to claim 17, wherein
the angle adjustment unit includes a rotation mechanism for rotating the
projector unit.

19. (New) The range finder according to claim 17, wherein the angle adjustment unit includes a rotation mechanism for rotating one or more of the polarizing direction selection units.

20. (New) The range finder according to claim 13, wherein the polarizing direction selected by the polarizing direction selection units is substantially perpendicular to the polarizing direction of the linearly polarized light in terms of angle.

21. (New) The range finder according to claim 17, wherein a reflected image based on light after specular-reflected light contained in the light reflected by the subject is removed by the angle adjustment unit is captured.

22. (New) The range finder according to claim 13, wherein the projector unit includes a light source, a light forming optical system, and a polarized light conversion optical system.

23. (New) The range finder according to claim 13, wherein the projector unit includes a light source, a light forming optical system, and a polarizing filter.

24. (New) The range finder according to claim 13, wherein each of the polarizing direction selection units comprises a polarizing filter.

25. (New) The range finder according to claim 13, wherein the second image input unit comprises a plurality of image input units.